What is claimed is:

1. A defect inspection apparatus, comprising:

an observation part changing unit changing an observation part of an observation object by driving a stage on which the observation object is placed, or an objective lens as opposed to the observation object;

a focus direction driving unit driving at least one of the stage and the objective lens in order to achieve focus on the observation object placed on the stage;

a focusing controlling unit performing focusing control by making said focus direction driving unit drive at least one of the stage and the objective lens in order to achieve focus on the observation object;

a focusing control parameter setting unit setting focusing control parameters used for the focusing control performed by said focusing controlling unit;

a pattern image obtaining unit obtaining a pattern image of a predetermined part by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to the predetermined part within the observation object, and by making said focusing controlling unit perform the focusing control according

to the focusing control parameters set by said focusing control parameter setting unit in order to achieve focus on the predetermined part;

a pattern image storing unit storing the pattern image obtained by said pattern image obtaining unit; and

a detecting unit detecting presence/absence of an abnormal condition of a part to be inspected by making a comparison between a pattern image, which is stored in said pattern image storing unit and obtained by said pattern image obtaining unit, of a reference part determined to be normal beforehand within the observation object, and a pattern image, which is obtained by said pattern image obtaining unit, of the part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation object, wherein

the focusing control parameters, which are used for the focusing control performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, are determined based on sample information obtained by the focusing control performed when said pattern image obtaining unit obtains the pattern image of the reference part.

2. The defect inspection apparatus according to claim 1, wherein

if the focusing control is unsuccessfully performed as a result of causing the focusing control to be performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, the focusing control parameters are changed to default values, and the pattern image of the part to be inspected is obtained by performing the focusing control according to the focusing control parameters, which are the default values.

3. The defect inspection apparatus according to claim 2, wherein

if the focusing control is unsuccessfully performed as a result of causing the focusing control to be performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, the pattern image of the part to be inspected is obtained by regarding a focusing position obtained by the focusing control performed when said pattern image obtaining unit obtains the pattern image of the reference part as a focusing position of the part to be inspected.

4. The defect inspection apparatus according to claim 3, wherein

when said pattern image obtaining unit obtains the pattern image of the part to be inspected by regarding the focusing position of the reference part as the focusing position of the part to be inspected, information about unsuccessful focusing control is added to the pattern image of the part to be inspected.

5. The defect inspection apparatus according to claim 1, wherein

said pattern image obtaining unit comprises

a reference pattern image obtaining unit obtaining the pattern image of the reference part by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to the reference part determined to be normal beforehand within the observation object, and by making said focusing controlling unit perform the focusing control according to the focusing control parameters in order to achieve focuse on the reference part according to the focusing control parameters set by said focusing control parameter setting unit, and

an inspection target pattern image

obtaining unit obtaining the pattern image of the part to be inspected by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to the part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation object, and by making said focusing controlling unit perform the focusing control in order to achieve focus on the part to be inspected according to the focusing control parameters set by said focusing control parameter setting unit.

6. The defect inspection apparatus according to claim 5, wherein:

the focusing control parameters used for the focusing control performed when said reference pattern image obtaining unit obtains the pattern image of the reference part are focusing control parameters, which are default values; and

the focusing control parameters used for the focusing control performed when said inspection target pattern image obtaining unit obtains the pattern image of the part to be inspected are focusing control parameters determined based on the sample information.

7. The defect inspection apparatus according to claim 1, wherein

the sample information is at least any of information about the focusing position of the reference part and information about a light amount according to light reflected from the reference part.

8. A defect inspection apparatus, comprising:

a pattern image obtaining unit obtaining a pattern image of a predetermined part by causing an observation part of an observation object to be changed to the predetermined part within the observation object, and by causing focusing control to be performed in order to achieve focus on the predetermined part according to set focusing control parameters;

a pattern image storing unit storing the pattern image obtained by said pattern image obtaining unit;

a detecting unit detecting presence/absence of an abnormal condition of a part to be inspected by making a comparison between a pattern image, which is stored in said pattern image storing unit and obtained by said pattern image obtaining unit, of a reference part determined to be normal beforehand within the observation object, and a pattern image, which is obtained by said pattern image obtaining unit, of the

part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation object, wherein

the focusing control parameters, which are used for the focusing control performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, are determined based on sample information obtained by focusing control performed when said pattern image obtaining unit obtains the pattern image of the reference part.

9. A defect inspection method, comprising:

driving a stage or an objective lens as opposed to an observation object in order to change an observation part of the observation object placed on the stage to a reference part determined to be normal beforehand within the observation object;

performing focusing control so that focusing is achieved on the reference part according to a first focusing control parameter;

determining a second focusing control parameter based on sample information obtained by the focusing control;

obtaining a pattern image of the reference part;

driving the stage or the objective lens in order

to change the observation part of the observation object to a part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation body;

performing the focusing control in order to achieve focus on the part to be inspected according to the second focusing control parameter;

obtaining a pattern image of the part to be inspected; and

detecting presence/absence of an abnormal condition of the part to be inspected by making a comparison between the pattern image of the reference part and the pattern image of the part to be inspected.

10. The defect inspection method according to claim 9, wherein

if the focusing control is unsuccessfully performed as a result of performing the focusing control such that focusing is achieved on the part to be inspected according to the second focusing control parameter, the focusing control is performed so that focusing is achieved on the part to be inspected according to the first focusing control parameter.

11. The defect inspection method according to

claim 10, wherein

if the focusing control is unsuccessfully performed as a result of performing the focusing control such that the focusing is achieved on the part to be inspected according to the first focusing control parameter, the focusing position obtained by the focusing control performed for the part to be referenced is regarded as the focusing position of the part to be inspected, and the pattern image of the part to be inspected is obtained.

12. The defect inspection method according to claim 11, wherein

when the pattern image of the part to be inspected is obtained by regarding the focusing position of the reference part as the focusing position of the part to be inspected, information about unsuccessful focusing control is added to the pattern image of the part to be inspected.

13. A defect inspection apparatus, comprising:

an illuminating unit illuminating an observation object;

an illumination intensity controlling unit controlling an intensity of illumination made by said

illuminating unit;

an image capturing unit performing image capturing, and obtaining an image of the observation object;

an image capturing controlling unit controlling any of exposure, a gain, and exposure and a gain when the image capturing is performed by said image capturing unit;

an observation part changing unit changing the observation part of the observation object by driving a stage on which the observation object is placed, or an objective lens as opposed to the observation object;

a focus direction driving unit driving at least one of the stage and the objective lens in order to achieve focus on the observation object placed on the stage;

a focusing controlling unit performing focusing control by making said focus direction driving unit drive at least one of the stage and the objective lens in order to achieve focus on the observation object;

a pattern image obtaining unit obtaining a pattern image of a predetermined part by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to a predetermined part of the

observation object, and by making said focusing controlling unit perform the focusing control in order to achieve focus on the predetermined part;

a pattern image storing unit storing the pattern image obtained by said pattern image obtaining unit; and

a detecting unit detecting presence/absence of an abnormal condition of a part to be inspected by making a comparison between a pattern image, which is stored in said pattern image storing unit and obtained by said pattern image obtaining unit, of a reference part determined to be normal beforehand within the observation object, and a pattern image, which is obtained by said pattern image obtaining unit, of the part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation object, wherein

any of said illumination controlling unit, said image capturing controlling unit, said illuminating unit and said image capturing controlling unit is controlled so that brightness of the pattern image of the reference part, which is obtained by said pattern image obtaining unit, and brightness of the pattern image of the part to be inspected match or approximately match.

14. The defect inspection apparatus according to claim 13, further comprising

a photodetecting unit detecting the illumination intensity, wherein

said illumination controlling unit is controlled based on a result of detection made by said photodetecting unit so that the brightness of the pattern image of the reference part and the brightness of the pattern image of the part to be inspected, which are obtained by said pattern obtaining unit, match or approximately match.

15. The defect inspection apparatus according to claim 13, further comprising

a focusing control parameter setting unit setting focusing control parameters used for the focusing control performed by said focusing controlling unit, wherein:

said pattern image obtaining unit obtains the pattern image of the predetermined part by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to the predetermined part within the observation object, and by making said

focusing controlling unit perform the focusing control in order to achieve focus on the predetermined part according to the focusing control parameters set by said focusing control parameter setting unit; and

the focusing control parameters, which are used for the focusing control performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, are determined based on sample information obtained by the focusing control performed when said pattern image obtaining unit obtains the pattern image of the reference part.

16. The defect inspection apparatus according to claim 14, further comprising

a focusing control parameter setting unit setting focusing control parameters used for the focusing control performed by said focusing controlling unit, wherein:

said pattern image obtaining unit obtains the pattern image of the predetermined part by making said observation part changing unit drive the stage or the objective lens in order to change the observation part of the observation object to the predetermined part within the observation object, and by making said focusing controlling unit perform the focusing control

in order to achieve focus on the predetermined part according to the focusing control parameters set by said focusing control parameter setting unit; and

the focusing control parameters, which are used for the focusing control performed when said pattern image obtaining unit obtains the pattern image of the part to be inspected, are determined based on sample information obtained by the focusing control performed when said pattern image obtaining unit obtains the pattern image of the reference part.

17. A defect inspection method, comprising:

driving a stage or an objective lens as opposed to an observation object in order to change an observation part of the observation object placed on the stage to a reference part determined to be normal beforehand within the observation object;

performing focusing control in order to achieve focus on the reference part;

obtaining an intensity of illumination for the observation object;

performing image capturing, and obtaining a pattern image of the reference part;

obtaining exposure and a gain when the image capturing is performed;

driving the stage or the objective lens in order to change the observation part of the observation object to a part to be inspected, which becomes a target of inspecting presence/absence of a defect within the observation object;

performing focusing control in order to achieve focus on the part to be inspected;

illuminating the observation object with a same illumination intensity as the obtained illumination intensity;

obtaining a pattern image of the part to be inspected by performing the image capturing with the same exposure and gain as the obtained exposure and gain; and

detecting presence/absence of an abnormal condition of the part to be inspected by making a comparison between the pattern image of the reference part and the pattern image of the part to be inspected.